

OA/OATT/RAA relevant sections and proposed changes:

Intra-PJM Tariffs --> OPERATING AGREEMENT --> OA 1. DEFINITIONS

On-Site Generators:

“On-Site Generators” shall mean generation facilities or portions of a generation facility (including Behind The Meter Generation) that (i) are not Generation Capacity Resources, (ii) are not injecting into the grid for the portion of a generation facility that participates as an Economic Load Response Participant or as a Demand Resource, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.

RAA ARTICLE 1 -- DEFINITIONS

Capacity Resources:

“Capacity Resources” shall mean megawatts of (i) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources meeting the requirements of the Reliability Assurance Agreement, Schedules 9 and 10 that are or will be owned by or contracted to a Party and that are or will be committed to satisfy that Party's obligations under the Reliability Assurance Agreement, or to satisfy the reliability requirements of the PJM Region, for a Delivery Year; (ii) net capacity from Existing Generation Capacity Resources or Planned Generation Capacity Resources not owned or contracted for by a Party which are accredited to the PJM Region pursuant to the procedures set forth in such Schedules 9 and 10; and (iii) load reduction capability provided by Demand Resources or Energy Efficiency Resources that are accredited to the PJM Region pursuant to the procedures set forth in the Reliability Assurance Agreement, Schedule 6.

OA Schedule 1 Economic Load Response Participant

1.5A.1 Qualification.

A Member or Special Member that is an end-use customer, Load Serving Entity or Curtailment Service Provider that has the ability to cause a reduction in demand as metered on an electric distribution company account basis (or for non-interval metered residential Direct Load Control customers, as metered on a statistical sample of electric distribution company accounts utilizing current data, as described in the PJM Manuals) or has an On-Site Generator that enables demand reduction may become an Economic Load Response Participant by complying with the requirements of the applicable Relevant Electric Retail Regulatory Authority and all other applicable federal, state and local regulatory entities together with this section 1.5A including, but not limited to, section 1.5A.3. A Member or Special Member may aggregate multiple individual end-use customer sites to qualify as an Economic Load Response Participant, subject to the requirements of Section 1.5A.10.

1.5A.3 Registration.

After confirming that an entity has met all of the qualifications to be an Economic Load Response Participant, the Office of the Interconnection shall notify the relevant electric distribution company or Load Serving Entity, as determined based upon the type of registration submitted (i.e., either an Economic Load Response registration, Economic Load Response residential customer registrations not participating in the Day-ahead Energy Market, or an Economic Load Response Regulation Only registration), of an Economic Load Response Participant's registration and request verification as to whether the load that may be reduced is subject to another contractual obligation or to laws or regulations of the Relevant Electric Retail Regulatory Authority that prohibit or condition the end-use customer's participation in PJM's Economic Load Response Program.

~~On-Site Generators:~~

~~"On-Site Generators" shall mean generation facilities (including Behind The Meter Generation) that (i) are not Capacity Resources, (ii) are not injecting into the grid, (iii) are either synchronized or non-synchronized to the Transmission System, and (iv) can be used to reduce demand for the purpose of participating in the PJM Interchange Energy Market.~~

3.3A.2.02 On-Site Generators.

On-Site Generators used as the basis for Economic Load Response Participant status pursuant to Section 1.5A shall be subject to the following provisions:

- i. The On-Site Generator shall be used solely to enable an Economic Load Response Participant to provide demand reductions in response to the Locational Marginal Prices in the Real-time Energy Market and/or the Day-ahead Energy Market and shall not otherwise have been operating;
- ii. If subsection (i) does not apply, the amount of energy from an On-Site Generator used to enable an Economic Load Response Participant to provide demand reductions in response to the Locational Marginal Prices in the Real-time Energy Market and/or the Day-ahead Energy Market shall be capable of being quantified in a manner that is acceptable to the Office of the Interconnection.

OA SCHEDULE 1 SECTION 8 - EMERGENCY AND PRE-EMERGENCY LOAD RESPONSE

8.2 Participant Qualifications

Two primary types of distributed resources are candidates to participate in the PJM Emergency Load Response Program and Pre-Emergency Load Response Program:

~~On-Site Generators~~

~~These generators (including Behind The Meter Generation) can be either synchronized or non-synchronized to the grid. Capacity Resources are not eligible for compensation under this program. Injections into the grid by local generators also will not be eligible for compensation under this program.~~

Load Reductions

A participant that has the ability to reduce a measurable and verifiable portion of its load, as metered on an EDC account basis.

Other OA/OATT/RAA changes or relevant sections

To Do: Make sure On-Site Generator is used for all and not "On Site Generator".

Formatted: Highlight

Formatted: Highlight

Manual(s) relevant sections and proposed changes

PJM Manual 11: Energy & Ancillary Services Market Operations Section 10: Overview of the Demand Resource Participation

10.2.2 Curtailment Service Providers

The following business rules apply to Curtailment Service Providers:

The CSP shall report the following generation attributes for each generation unit at the location. Only locations with on-site generation that will be used to provide the load reduction and have environmental restrictions as defined and required by applicable local, state or federal law, ordinances and regulations that require emergency conditions to operate may qualify as an Emergency Demand Resource.

On-Site Generator Type - CSPs shall provide PJM with the type of on-site generation used for load reduction. On-Site Generator types are: Internal Combustion Engine, Combustion Turbines, Steam Engines and Cogeneration units (this also include Central Heat and Power units).

Generator Fuel Type - Locations that use generators, in whole or in part as a load reduction method shall provide PJM with the primary fuel type used for each generator which includes: Coal, Diesel, Natural Gas, Oil, Gasoline, Kerosene, Propane, Wood, Landfill Gases and Waste products. In cases where the on-site generator has a mixed fuel type, CSPs should report on the primary fuel source as the on-site generator fuel type.

Generator Vintage - The year the generator was built (included on nameplate). If you do not know the exact year the CSP should use reasonable estimate.

Generator Retrofit Year - If the generator was retrofit for pollution control equipment please include the year of the retrofit or a reasonable estimate of year if specific year is not available

Nameplate Capacity - MW rated capacity for the generator

Permit Status - The current status of environmental permits for the generator where:

- "Available" - indicates that the CSP represents to PJM that the end-use customer generator has all the Local, State and Federal permits required to operate in the PJM Market as a demand response resource. Unless notified otherwise, the Office of the Interconnection shall deem such representation applies to each time the On-Site Generator is used to reduce demand to participate in the PJM markets and that the On- Site Generator is being operated consistent with all applicable permits.
- "Not Available" - indicates that the CSP represents to PJM that the end-use customer generator does not have the required Local, State and Federal permits required to operate in the PJM Market as a demand response resource. The CSP shall enter a load reduction value of zero, until all required permits become available.

- "Permit Application in Progress" - indicates that the CSP represents to PJM that one or more of the required Local, State and/or Federal permits for the end-use customer generator are pending and are expected to be received prior to the effective date of registration. CSP will terminate the registration, if the on-site generator is the only source for the demand response activity, and update the status if necessary permits are not received prior to such end-use customer generator's registration effective date.
- "Not Applicable" – indicates that the CSP represents to PJM that one or more of the Local, State and/or Federal permits for the end-use customer generator are not required for generator to participate as a demand resource and all other necessary permission from appropriate Local, State and Federal environmental agencies has been received.
- Permit Type – The permit type indicates whether on-site generators can run during emergency or non-emergency conditions:
 - o "Emergency Only" – An "Emergency Only" permit type indicates that the on-site Generator has the Local, State and Federal permits required to operate in the PJM Market as a demand response resource during grid emergency conditions. This also indicates that such location may qualify as Emergency resource instead of being a Pre-Emergency resource.
 - o "Non-Emergency" – A "Non-Emergency" permit type indicates that the on-site Generator has the Local, State and Federal permits required to operate in the PJM Market as a demand response resource during emergency and non-emergency grid conditions.
- Interconnection Type – The CSP will indicate if the generator is interconnected to allow injections onto the transmission and distribution system. The CSP will designate as: "none", "ISA", "WMPA", "NEM", "PURPA QF" or other category as necessary. If ISA, WMPA, or PURPA QF then CSP will also provide the appropriate PJM reference to the generator and the associated amount of injection rights.

Demand Resource intending to run an On-Site Generator in support of local load represents to PJM that it holds all applicable environmental and use permits for running those generators by submitting a registration. Continuing participation will be deemed as a continuing representation by the owner that each time its On-Site Generator is run it complies with all applicable permits, including any emissions, run-time limit or other constraint on plant operations that may be imposed by such permits.

CSPs with an On-Site Generator with interconnection rights to participate in the wholesale markets with injections onto the grid through an ISA or WMPA shall:

- inform PJM that the On-Site Generator will participate as DR to offset load through existing DR market rules and participate as generation resource with injections as defined by generation market rules,
- Install and maintain telemetry at the point of interconnection and the On-Site Generator, and as outlined in Manual 14D.

• Request CBL review if generator will participate as an Economic DR resource in the energy market. This is to ensure the load reductions from the On-Site Generator can be quantified separately from generator injections onto the grid. Load reductions done in order to inject power onto the grid are considered part of normal operations and therefore not eligible for Economic DR settlements.

• Manage the DR offers to reduce load and/or Generation offers to inject power in the wholesale markets based on the actual generator capability. CSP will make sure that the total offer amount for the modelled resources will not exceed the capability for the generator. All regulation offers will be made through the DR modelled resource or as otherwise approved by PJM.

PJM Manual 14D: Generator Operational Requirements Section 4: Data Exchange and Metering Requirements

4.2.2 Metering Plan

Several factors determine the real-time telemetry to PJM requirements for a generator. The following table shows the criteria for which a generator may be required to provide real-time telemetry to PJM. If one or more of the criteria are true for that generator, then telemetry is required.

[Proposed to add new row to the follow table]

Criteria	Real-Time Telemetry Requirements
Generators participating in the PJM market as capacity resources	Real and reactive power
Generators 10 MW (Maximum Facility Output) or larger	Real and reactive power

Criteria	Real-Time Telemetry Requirements
Generators greater than 1 MW (Maximum Facility Output) and connected at a bus operating at 50 kV or greater	Real and reactive power
Solar parks 3 MW (Maximum Facility Output) or greater	Real and reactive power (see Section 12.2 for additional requirements)
Distributed generators (such as, the treatment of many units dispersed over a wide area as one aggregated unit) modeled less than 10 MW (Maximum Facility Output)	Real and reactive data at the BES injection point of accuracy within 10% of hourly MWh settlements data (revenue meter or accumulator data)

Criteria: Generators that will participate as both a demand response resource when it will reduce load and has PJM-approved interconnection rights to inject power.

Real-Time Telemetry Requirements: [Real and reactive data at the BES injection point and real and reactive power for the generator.](#)

Real-Time Data

Real-time or instantaneous information is defined as data required by PJM that determines system security and stability as well as congestion and LMP. The minimum data model for realtime data transmission requires:

- Instantaneous Net (+/-) MW for each unit, measured on the low-side of generator step-up transformer
- Instantaneous Net (+/-) MVAR for each unit, measured on the low-side of generator step-up transformer
- Distributed generators modeled at less than 10MW must provide Instantaneous Net (+/-) MW and MVAR at aggregation point (BES injection point) based on an agreed upon algorithm.
- [Generators that will participate as both a demand response resources that have PJM-approved interconnection rights to inject power must- provide Instantaneous Net \(+/- \) MW and MVAR at BES injection point and Instantaneous Net \(+/- \) MW and MVAR for each unit, measured on the low-side of generator step-up transformer at a point where it does not include associated load served by the generator.](#)

Additional transmitted data may include bus voltages, circuit breaker status, and other data.